BRAIN RESEARCH

VOL. 638 NOS. 1/2 **CONTENTS** **28 FEBRUARY 1994**

Cited in Biological Abstracts (BIOSIS) – Chem. Abstracts – Index Medicus (MEDLINE) – Current Contents (Life Sci.) – Excerpta Medica (EMBASE) – Psychological Abstracts (PsycINFO) – Pascal et Francis (INIST-CNRS) – RIS (Reference Update) – Current Awareness in Biological Science (CABS)

Announcement from the Publishers v

Guidelines for the submission of manuscripts vii

Research Reports

Zonal organization of climbing fiber projections to the nodulus in the cat
K.-i. Akaogi, Y. Sato, K. Ikarashi and T. Kawasaki (Japan) 1

Mossy fiber projections from the brain stem to the nodulus in the cat. An experimental study comparing the nodulus, the uvula and the flocculus
K.-i. Akaogi, Y. Sato, K. Ikarashi and T. Kawasaki (Japan) 12

Cell death in primary cultures of mouse neurons and astrocytes during exposure to and 'recovery' from hypoxia, substrate deprivation and simulated ischemia
E. Sochocka, B.H.J. Juurlink, W.E. Code, V. Hertz, L. Peng and L. Hertz (Canada) 21

Lesions of the pedunculopontine tegmental nucleus block drug-induced reinforcement but not amphetamine-induced locomotion
M.C. Olmstead and K.B.J. Franklin (Canada) 29

Antiepileptogenic and anticonvulsant effects of NBQX, a selective AMPA receptor antagonist, in the rat kindling model of epilepsy
T. Namba, K. Morimoto, K. Sato, N. Yamada and S. Kuroda (Japan) 36

Sex differences in the anticonvulsant efficacy of phenytoin in amygdala-kindled rats
U. Ebert, C. Rundfeldt and W. Löscher (Germany) 45

Effects of kainate-induced seizures on cerebral metabolism: a combined ^{1}H and ^{31}P NMR study in rat
Ph. Meric, B. Barrere, M. Peres, B. Gillet, G. Berenger, J.C. Beloeil and J. Seylaz (France) 53

The effect of racemic ketamine on the large conductance Ca^{+2}-activated potassium (BK) channels in GH_3 cells
D.D. Denson, P. Duchatelle and D.C. Eaton (USA) 61

Cholecystokinin octapeptide (CCK-8) injected into a cerebral ventricle induces a fever-like thermoregulatory response mediated by type B CCK-receptors in the rat
Z. Szelényi, L. Barthó, M. Székely and A.A. Romanovsky (Hungary, Byelorussia) 69

The effects of systemic glucose concentration on brain metabolism following repeated brain ischemia
A.R. Laptook, R.J.T. Corbett, O. Arencibia-Mireles, J. Ruley and D. Garcia (USA) 78

Quantitative autoradiography of 5-HT_{1D} and 5-HT_{1E} binding sites labelled by [^{3}H]5-HT, in frontal cortex and the hippocampal region of the human brain
P. Barone, D. Jordan, F. Atger, N. Kopp and G. Fillion (France) 85

Effects of diverse ω-conopeptides on the in vivo release of glutamic and γ-aminobutyric acids
R. Newcomb and A. Palma (USA) 95

Stimulation of the hypothamus initiates the urethrogenital reflex in male rats
L. Marson and K.E. McKenna (USA) 103

Intracellular calcium responses of circadian pacemaker neurons measured with fura-2
M.E. Geusz, S. Michel and G.D. Block (USA) 109

Colocalization of octopamine and FMRFamide related peptide in identified heart projecting (DUM) neurones in the locust revealed by immunocytochemistry
P.A. Stevenson and H.-J. Pflüger (Germany) 117

Dendritic orientation of thalamocortical projection neurons in the ventrobasal complex of macaques
L.A. Havton and P.T. Ohara (USA) 126

GABAergic and dopaminergic transmission in the brain of Roman high-avoidance and Roman low-avoidance rats
O. Giorgi, M. Orlandi, R.M. Escorihuela, P. Driscoll, D. Lecca and M.G. Corda (Italy, Spain, Switzerland) 133

Distribution of glutamate- and GABA-immunoreactive neurons projecting to the cardioacceleratory center of the intermediolateral nucleus of the thoracic cord of SHR and WKY rats: a double-labeling study
M. Miura, K. Takayama and J. Okada (Japan) 139

Cholera toxin-induced $G_s\alpha$ down-regulation in neural tissue: studies on the pineal gland
T. Babila and D.C. Klein (USA) 151

Spatial, movement- and reward-sensitive discharge by medial ventral striatum neurons of rats
A.M. Lavoie and S.J.Y. Mizumori (USA) 157

Differential neuronal responses to angiotensin III from the subfornical organ of normotensive and spontaneously hypertensive rats
C.C.H. Yang, J.Y.H. Chan, J.-T. Pan and S.H.H. Chan (Taiwan) 169

(contents continued on p. 360)

0006-8993(19940228)638:1/2;1-M

BRAIN RESEARCH

VOL. 638 NOS. 1/2 **CONTENTS** **28 FEBRUARY 1994**

Cited in Biological Abstracts (BIOSIS) – Chem. Abstracts – Index Medicus (MEDLINE) – Current Contents (Life Sci.) – Excerpta Medica (EMBASE) – Psychological Abstracts (PsycINFO) – Pascal et Francis (INIST-CNRS) – RIS (Reference Update) – Current Awareness in Biological Science (CABS)

Announcement from the Publishers v

Guidelines for the submission of manuscripts vii

Research Reports

Zonal organization of climbing fiber projections to the nodulus in the cat
K.-i. Akaogi, Y. Sato, K. Ikarashi and T. Kawasaki (Japan) 1

Mossy fiber projections from the brain stem to the nodulus in the cat. An experimental study comparing the nodulus, the uvula and the flocculus
K.-i. Akaogi, Y. Sato, K. Ikarashi and T. Kawasaki (Japan) 12

Cell death in primary cultures of mouse neurons and astrocytes during exposure to and 'recovery' from hypoxia, substrate deprivation and simulated ischemia
E. Sochocka, B.H.J. Juurlink, W.E. Code, V. Hertz, L. Peng and L. Hertz (Canada) 21

Lesions of the pedunculopontine tegmental nucleus block drug-induced reinforcement but not amphetamine-induced locomotion
M.C. Olmstead and K.B.J. Franklin (Canada) 29

Antiepileptogenic and anticonvulsant effects of NBQX, a selective AMPA receptor antagonist, in the rat kindling model of epilepsy
T. Namba, K. Morimoto, K. Sato, N. Yamada and S. Kuroda (Japan) 36

Sex differences in the anticonvulsant efficacy of phenytoin in amygdala-kindled rats
U. Ebert, C. Rundfeldt and W. Löscher (Germany) 45

Effects of kainate-induced seizures on cerebral metabolism: a combined ^{1}H and ^{31}P NMR study in rat
Ph. Meric, B. Barrere, M. Peres, B. Gillet, G. Berenger, J.C. Beloeil and J. Seylaz (France) 53

The effect of racemic ketamine on the large conductance Ca^{+2}-activated potassium (BK) channels in GH_3 cells
D.D. Denson, P. Duchatelle and D.C. Eaton (USA) 61

Cholecystokinin octapeptide (CCK-8) injected into a cerebral ventricle induces a fever-like thermoregulatory response mediated by type B CCK-receptors in the rat
Z. Szelényi, L. Barthó, M. Székely and A.A. Romanovsky (Hungary, Byelorussia) 69

The effects of systemic glucose concentration on brain metabolism following repeated brain ischemia
A.R. Laptook, R.J.T. Corbett, O. Arencibia-Mireles, J. Ruley and D. Garcia (USA) 78

Quantitative autoradiography of 5-HT_{1D} and 5-HT_{1E} binding sites labelled by [^{3}H]5-HT, in frontal cortex and the hippocampal region of the human brain
P. Barone, D. Jordan, F. Atger, N. Kopp and G. Fillion (France) 85

Effects of diverse ω-conopeptides on the in vivo release of glutamic and γ-aminobutyric acids
R. Newcomb and A. Palma (USA) 95

Stimulation of the hypothamus initiates the urethrogenital reflex in male rats
L. Marson and K.E. McKenna (USA) 103

Intracellular calcium responses of circadian pacemaker neurons measured with fura-2
M.E. Geusz, S. Michel and G.D. Block (USA) 109

Colocalization of octopamine and FMRFamide related peptide in identified heart projecting (DUM) neurones in the locust revealed by immunocytochemistry
P.A. Stevenson and H.-J. Pflüger (Germany) 117

Dendritic orientation of thalamocortical projection neurons in the ventrobasal complex of macaques
L.A. Havton and P.T. Ohara (USA) 126

GABAergic and dopaminergic transmission in the brain of Roman high-avoidance and Roman low-avoidance rats
O. Giorgi, M. Orlandi, R.M. Escorihuela, P. Driscoll, D. Lecca and M.G. Corda (Italy, Spain, Switzerland) 133

Distribution of glutamate- and GABA-immunoreactive neurons projecting to the cardioacceleratory center of the intermediolateral nucleus of the thoracic cord of SHR and WKY rats: a double-labeling study
M. Miura, K. Takayama and J. Okada (Japan) 139

Cholera toxin-induced $G_s\alpha$ down-regulation in neural tissue: studies on the pineal gland
T. Babila and D.C. Klein (USA) 151

Spatial, movement- and reward-sensitive discharge by medial ventral striatum neurons of rats
A.M. Lavoie and S.J.Y. Mizumori (USA) 157

Differential neuronal responses to angiotensin III from the subfornical organ of normotensive and spontaneously hypertensive rats
C.C.H. Yang, J.Y.H. Chan, J.-T. Pan and S.H.H. Chan (Taiwan) 169

(contents continued on p. 360)

0006-8993(19940228)638:1/2;1-M

(contents continued)

Methamphetamine-induced decrease in neural glucocorticoid receptors: relationship to monoamine levels
M.T. Lowy and S. Novotney (USA) 175
Collateral axonal projections to limbic structures from ventrolateral medullary A1 noradrenergic neurons
S. Roder and J. Ciriello (Canada) 182
Substance P-like immunoreactivity in the hypothalamic suprachiasmatic nucleus of *Phodopus sungorus* – relation to daytime, photoperiod, sex and age
S. Reuss and K. Bürger (Germany) 189
The habituation of brainstem catecholaminergic groups to chronic daily restraint stress is stress specific like that of the hypothalamo-pituitary-adrenal axis
J. Lachuer, I. Delton, M. Buda and M. Tappaz (France) 196
Aromatase-immunoreactivity is localised specifically in neurones in the developing mouse hypothalamus and cortex
C. Beyer, S.J. Green, P.J. Barker, N.S. Huskisson and J.B. Hutchison (UK) 203
Functional characterization of the rat GAP-43 promoter
R.G. Starr, B. Lu and H.J. Federoff (USA) 211
Glucose transporter 2 (GLUT 2): expression in specific brain nuclei
C. Leloup, M. Arluison, N. Lepetit, N. Cartier, P. Marfaing-Jallat, P. Ferré and L. Pénicaud (France) 221
Substance P suppresses the activity of α_2-adrenoceptors of the nucleus reticularis gigantocellularis involved in cardiovascular regulation in the rat
W.-B. Len, M.-Y. Tsou, S.H.H. Chan and J.Y.H. Chan (Taiwan) 227
Modulation of light-induced C-Fos expression in the suprachiasmatic nuclei by 5-HT_{1A} receptor agonists
J.D. Glass, M. Selim and M.A. Rea (USA) 235
Activation of noradrenergic neurons projecting to the diencephalon following central administration of histamine is mediated by H_1 receptors
A.E. Fleckenstein, K.J. Lookingland and K.E. Moore (USA) 243
CNS monoamine cell groups projecting to pancreatic vagal motor neurons: a transneuronal labeling study using pseudorabies virus
A.D. Loewy, M.F. Franklin and M.A. Haxhiu (USA) 248
Enhancement of cytosolic calcium, prostacyclin and nitric oxide by bradykinin and the ACE inhibitor ramiprilat in porcine brain capillary endothelial cells
G. Wiemer, R. Popp, B.A. Schölkens and H. Gögelein (Germany) 261
Regional differences in testosterone effects on vasopressin receptors and on vasopressin immunoreactivity in intact and castrated Siberian hamsters
M. Dubois-Dauphin, J.-M. Theler, A. Ouarour, P. Pévet, C. Barberis and J.J. Dreifuss (Switzerland, France) 267
Enlargement of olivo-cerebellar microzones in the agranular cerebellum of adult rats
Y. Fuhrman, M.A. Thomson, G. Piat, J. Mariani and N. Delhaye-Bouchaud (France) 277
Alpha$_{2A}$-adrenergic receptors are present in lower brainstem catecholaminergic and serotonergic neurons innervating spinal cord
P.G. Guyenet, R.L. Stornetta, T. Riley, F.R. Norton, D.L. Rosin and K.R. Lynch (USA) 285
The septum and amygdala differentially mediate the anxiolytic effects of benzodiazepines
C. Pesold and D. Treit (Canada) 295
Nicotinic and muscarinic acetylcholine responses in differentiated PC12 cells
K. Furukawa, J. Nabekura and N. Akaike (Japan) 302
The effect of chronic imipramine administration on the densities of 5-HT1A and 5-HT2 receptors and the abundancies of 5-HT receptor and transporter mRNA in the cortex, hippocampus and dorsal raphe of three strains of rat
P.W.J. Burnet, D. Michelson, M.A. Smith, P.W. Gold and E.M. Sternberg (USA) 311

Short Communications

The effect of 5-HT_3 receptor antagonists on the morphine-induced excitation of A10 dopamine cells: electrophysiological studies
A.N. Gifford and R.Y. Wang (USA) 325
Calbindin-like immunoreactivity in epithelial cells of the newborn and adult human vomeronasal organ
E.W. Johnson, P.M. Eller and B.W. Jafek (USA) 329
Reduction of 1-methyl 1,2,3,4-tetrahydroisoquinoline level in substantia nigra of the aged rat
A. Ayala, J. Parrado, J. Cano and A. Machado (Spain) 334
Alterations in acetylcholinesterase and choline acetyltransferase activities and neuropeptide levels in the ventral spinal cord of the Wobbler mouse during inherited motoneuron disease
K.K.L. Yung, F. Tang and L.L. Vacca-Galloway (Hong Kong) 337
A centrally active drug that modulates AMPA receptor gated currents
A. Arai, M. Kessler, P. Xiao, J. Ambros-Ingerson, G. Rogers and G. Lynch (USA) 343
Thyrotropin-releasing hormone- and GABA-like immunoreactivity coexist in neurons in the dorsal horn of the rat spinal cord
A.A. Fleming and A.J. Todd (UK) 347
Autoradiographic measurement of tyrosine hydroxylase immunoreactivity in rat brain using enhanced chemiluminescence: a general method for combined quantitative and cytochemical detection
A.B. Norman, U.M. Khosla, J.M. Klug and H.R. Thompson (USA) 352